

# Quad Array for ESD Protection

This quad voltage suppressor is designed for applications requiring transient overvoltage protection capability. It is intended for use in voltage and ESD sensitive equipment such as computers, printers, business machines, communication systems, medical equipment, and other applications. Its quad junction common anode design protects four separate lines using only one package. These devices are ideal for situations where board space is at a premium.

### Specification Features

- SC-88 Package Allows Four Separate Unidirectional Configurations
- Low Leakage < 1  $\mu$ A @ 5 Volt
- Breakdown Voltage: 6.4 – 7.2 Volt @ 5 mA
- Low Capacitance (40 pF typical)
- ESD Protection Meeting 61000-4-2 Level 4 and 16 kV Human Body Model
- We declare that the material of product compliance with RoHS requirements.

### Mechanical Characteristics

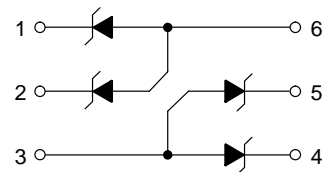
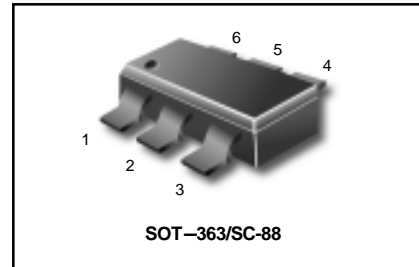
- Void Free, Transfer-Molded, Thermosetting Plastic Case
- Corrosion Resistant Finish, Easily Solderable
- Package Designed for Optimal Automated Board Assembly
- Small Package Size for High Density Applications

### MAXIMUM RATINGS ( $T_A = 25^\circ\text{C}$ unless otherwise noted)

Rating	Symbol	Value	Unit
Peak Power Dissipation @ 8 x 20 (Note 1)	$P_{pk}$	75	Watts
Steady State Power Dissipation (Note 2)	$P_D$	385	mW
Thermal Resistance – Junction to Ambient Derate Above 25	$R_{\theta JA}$	328 3.0	$^\circ\text{C}/\text{W}$ $\text{mW}/^\circ\text{C}$
Maximum Junction Temperature	$T_{Jmax}$	150	$^\circ\text{C}$
Operating Junction and Storage Temperature Range	$T_J, T_{stg}$	-55 to +150	$^\circ\text{C}$
ESD Discharge MIL STD 883C – Method 3015-6 IEC61000-4-2, Air Discharge IEC61000-4-2, Contact Discharge	$V_{PP}$	16 16 8	kV
Lead Solder Temperature (10 seconds duration)	$T_L$	260	$^\circ\text{C}$

1. Per Waveform Figure 1
2. Mounted on FR-5 Board = 1.0 X 0.75 X 0.062 in.

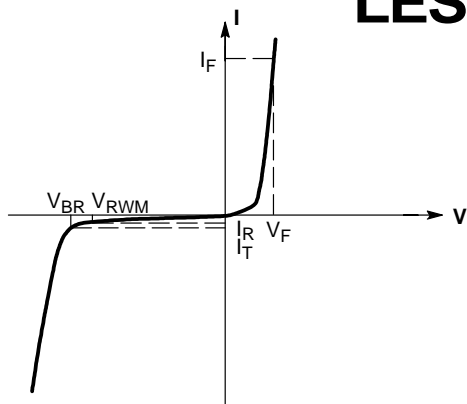
## LESD6A5V6W6T1G



### ORDERING INFORMATION

Device	Package	Shipping
LESD6A5V6W6T1G	SC-88	3000/Tape & Reel

# LESD6A5V6W6T1G



V-I Curve

### ELECTRICAL CHARACTERISTICS

Device	Breakdown Voltage $V_{BR}$ @ 5 mA (Volts)			Leakage Current $I_{RM}$ @ $V_{RWM} = 3.3$ V	Typical Capacitance @ 0 V Bias	Max $V_F$ @ $I_F = 10$ mA	Max $Z_Z$ @ 5 mA	Max $Z_{ZK}$ @ 0.5 mA
	Min	Nom	Max	( $\mu$ A)	(pF)	(V)	( $\Omega$ )	( $\Omega$ )
LESD6A5V6W6T1G	5.2	5.6	6.0	1.0	45	1.25	30	300

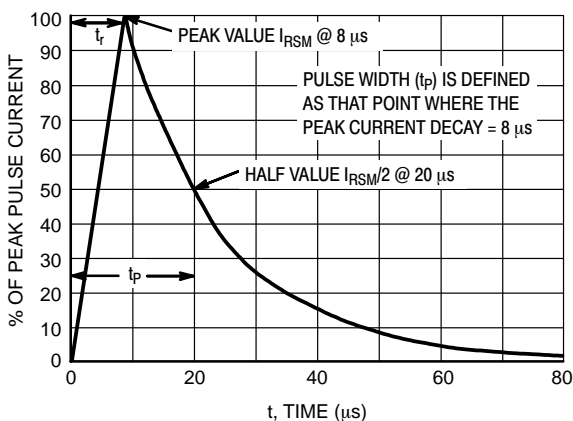


Figure 1.  $8 \times 20 \mu s$  Pulse Waveform

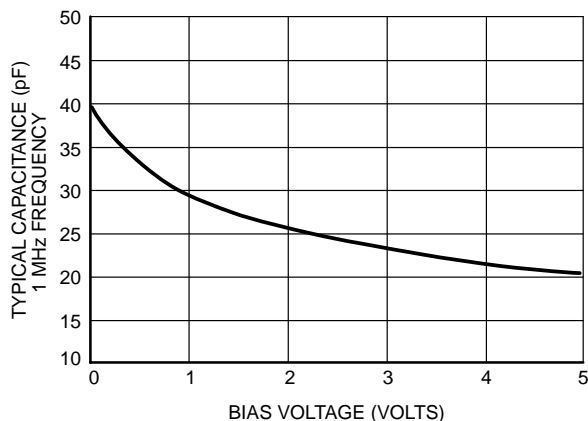


Figure 2. Capacitance

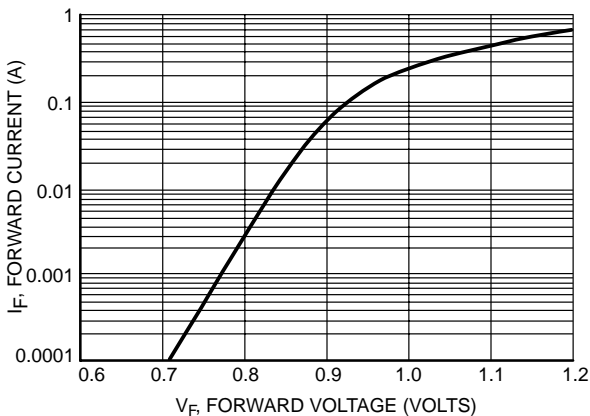


Figure 3. Forward Voltage

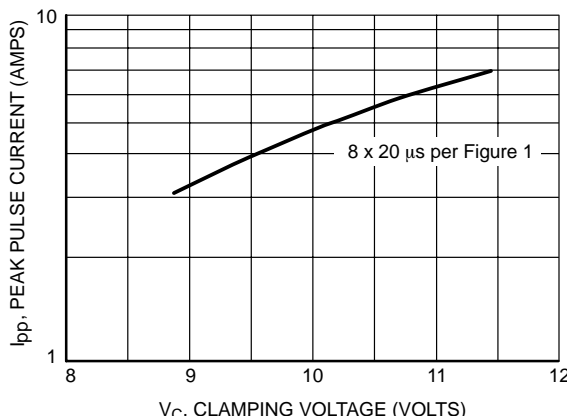
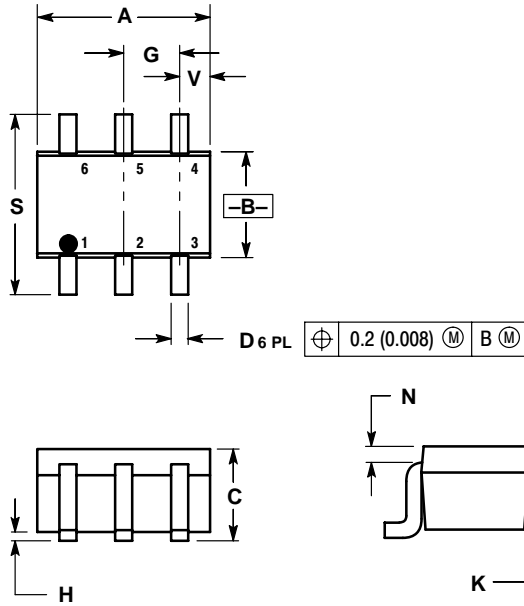


Figure 4. Clamping Voltage versus Peak Pulse Current

# LESD6A5V6W6T1G

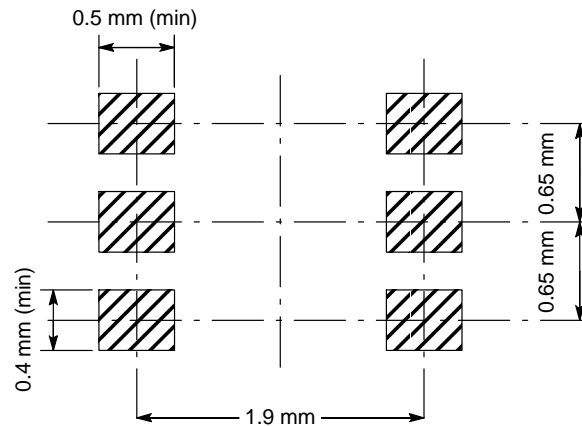
## PACKAGE DIMENSIONS

SC-88 (SOT-363)

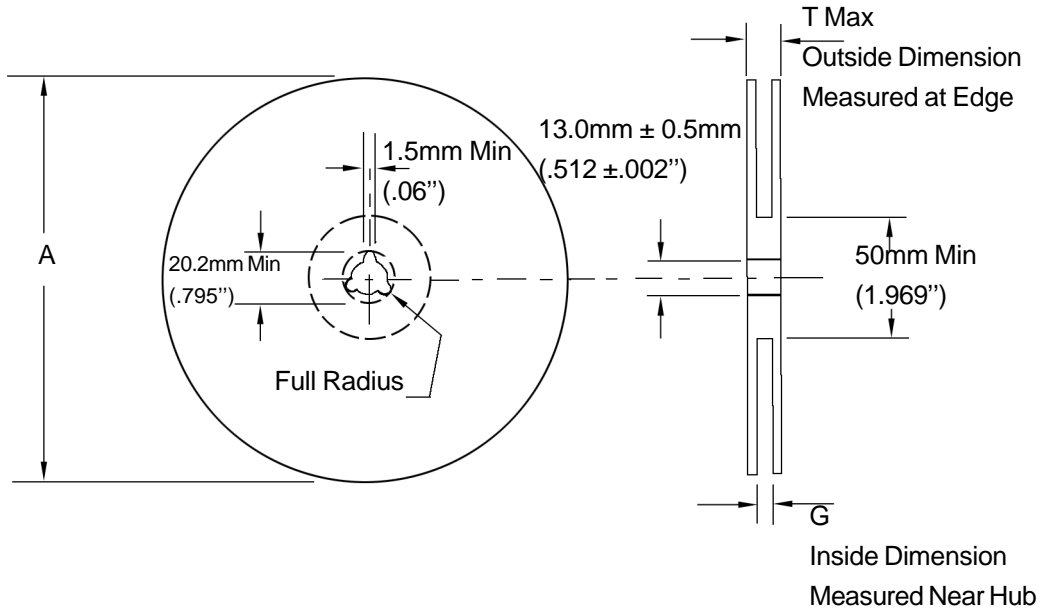


- NOTES:  
 1. DIMENSIONING AND TOLERANCING PER ANSI Y14.5M, 1982.  
 2. CONTROLLING DIMENSION: INCH.

DIM	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	0.071	0.087	1.80	2.20
B	0.045	0.053	1.15	1.35
C	0.031	0.043	0.80	1.10
D	0.004	0.012	0.10	0.30
G	0.026 BSC		0.65 BSC	
H	---	0.004	---	0.10
J	0.004	0.010	0.10	0.25
K	0.004	0.012	0.10	0.30
N	0.008 REF		0.20 REF	
S	0.079	0.087	2.00	2.20
V	0.012	0.016	0.30	0.40



## EMBOSSED TAPE AND REEL DATA FOR DISCRETES



Size	A Max	G	T Max
8 mm	330mm (12.992")	8.4mm+1.5mm, -0.0 (.33"+.059", -0.00)	14.4mm (.56")

### Reel Dimensions

Metric Dimensions Govern — English are in parentheses for reference only

#### Storage Conditions

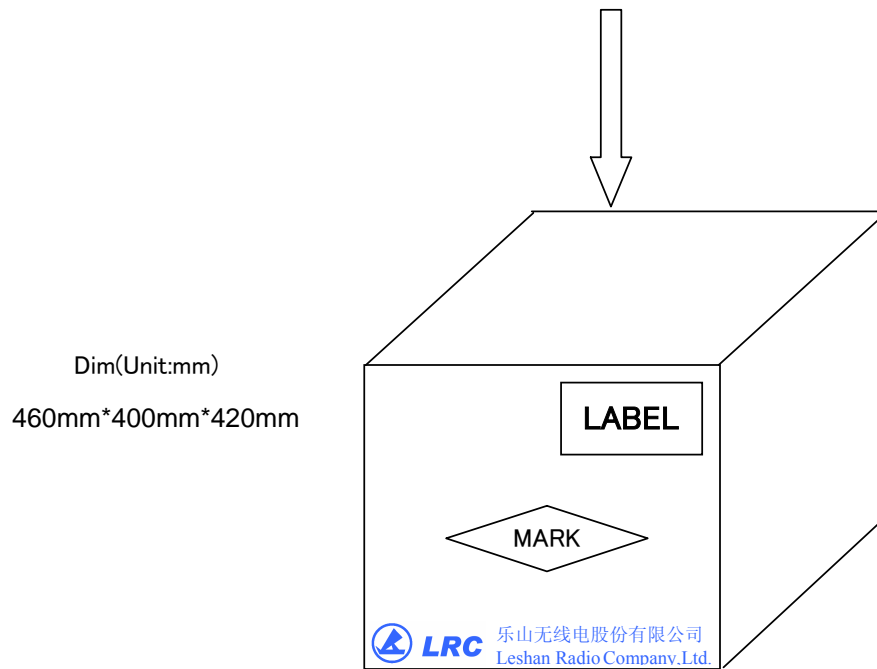
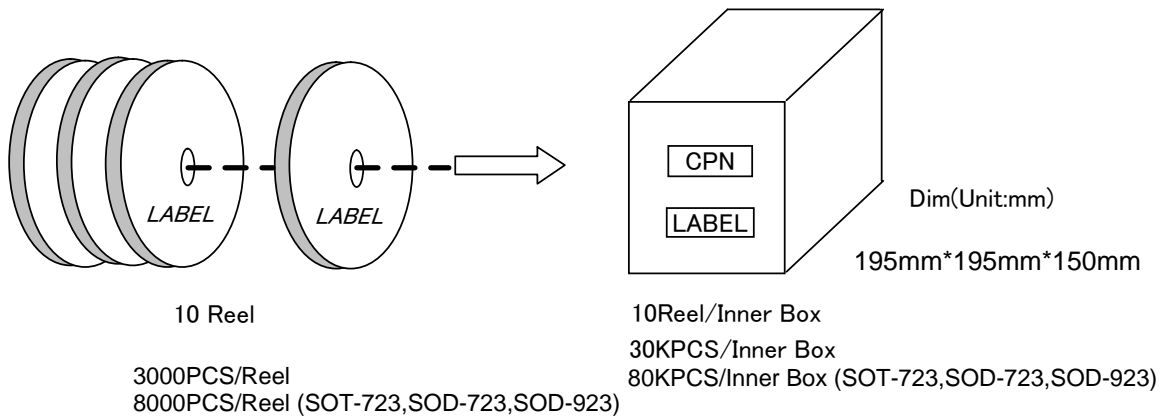
Temperature: 5 to 40 Deg.C (20 to 30 Deg. C is preferred)

Humidity: 30 to 80 RH (40 to 60 is preferred )

Recommended Period: One year after manufacturing

(This recommended period is for the soldering condition only. The characteristics and reliabilities of the products are not restricted to this limitation)

## Shipment Specification



12 Inner Box/Carton

360KPCS/Carton  
960KPCS/Carton (SOT-723,SOD-723,SOD-923)